

## REMARKS/ARGUMENTS

In the Office Action mailed May 1, 2009, claims 1-12 were rejected. Additionally, claims 5, 11, and 14 were objected to. In response, Applicants hereby request reconsideration of the application in view of the amendments and the below-provided remarks. No claims are added or canceled.

For reference, claims 1, 2, 4, 5, 7, and 10-14 are amended. In particular, these claims are amended to clarify the language of the claims, improve the formatting of the claims, and/or correct grammatical errors. These amendments are supported by the original language of the claims.

### Objections to the Claims

The Office Action objects to claims 5, 11, and 14 for informalities. In particular, the Office Action asserts that portions of the language of claims 5, 11, and 14 are unclear. In particular, the Office Action states that the wording “the control signal can be received and processed as a component of the indicator signal” is unclear. The Office Action then states that, for purposes of examination, it is assumed that the indicated language means that the control signal is generated because of the indicator signal.

While the details of the specification are not read into the limitations of the claim, it may be useful to refer to the specification of the present application for a contextual understanding of the indicated language in the claim. The specification of the present application states:

The collision-detection means 23 are furthermore arranged to receive the control signal CS from the information unit-processing means 24 and to supply the control signal CS as a component of the indicator signal IS. Here, provision is made for the carrier signal C generated unchanged in respect of its amplitude in the conventional manner, that is in accordance with the prior art, during receipt of the information units, to be subjected to a modulation for the purpose of supplying the indicator signal IS through the communications arrangement 2 and for the control signal CS to be represented by a further modulated signal section, through a further modulation within the modulated signal section of the carrier signal representing the indicator signal IS. At the same time, for example, the indicator signal IS can be defined by a brief modulation depth of 90% and the control signal can be defined by a brief modulation depth of 30%

within the signal section that has the modulation depth of 90%. It should be pointed out here that even the appearance of the indicator signal IS on its own in the carrier signal C can by definition represent one of the two possible binary values ONE or ZERO, but this can represent a limitation as regards maximum flexibility of the area of application for the system 1. Present Application, page 11, line 21 to page 12, line 2 (emphasis added).

Given the description of the specification, the references to a control signal as a component of an indicator signal in the claims of the present application should be understood as drawing a relationship between the control and indicator signals. Specifically, the control signal relates to the indicator signal as a component, or part, of the indicator signal.

Furthermore, it should be noted that the language of the claim, as understood within the context of the specification, does not require that the control signal be generated because of the indicator signal. There appears to be no language in the claims or specification to require this type of cause-and-effect relationship. Consequently the assumed meaning of the claim language proposed in the Office Action is traversed. Accordingly, Applicants respectfully request the objections to claims 5, 11, and 14 be withdrawn.

#### Claim Rejections under 35 U.S.C. 103

Claims 1-12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kalinowski et al. (U.S. Pat. No. 7,361,976, hereinafter Kalinowski) in view of Hulvey et al. (U.S. Pat. No. 6,193,163, hereinafter Hulvey). However, Applicants respectfully submit that these claims are patentable over Kalinowski and Hulvey for the reasons provided below.

#### Independent Claim 1

Applicants assert that claim 1 is patentable over Kalinowski and Hulvey. Claim 1 recites:

A circuit for a data carrier which data carrier comprises an interface for contactless communication with a communications arrangement, wherein the circuit comprises:

memory means for storing identification information consisting of information units, which identification information is capable of being supplied via the interface to the communications arrangement, and

signal processing means that are arranged to receive and process an indicator signal which indicator signal indicates a substantially simultaneous appearance of two different information units, of which two different information units the one information unit is contained in the identification information stored in the memory stage of the circuit and the other information unit is contained in different identification information stored in a memory stage of a different circuit, and which indicator signal is generated by the communications arrangement upon detection of such a substantially simultaneous appearance of different information units and is communicated to the circuit and wherein the signal processing means as a consequence of receiving and processing the indicator signal are arranged, firstly, to interrupt the supply of the identification information that has caused the indicator signal and are arranged, secondly, to memorize at least the information unit that has caused the indicator signal.  
(Emphasis added.)

Claim 1 is patentable over Kalinowski and Hulvey for at least two reasons. First, the combination of cited references does not teach the indicated limitations of claim 1. Second, the rejection of claim 1 is improper because the Office Action does not establish a *prima facie* rejection for claim 1. Hence, Applicants submit that claim 1 is patentable over the combination of Kalinowski and Hulvey because the combination of cited references does not teach all of the indicated limitations of the claim and because the proposed combination of references is improper.

1. The Combination of Cited References Does Not Teach The Indicated Limitations of Claim 1.

In contrast to the limitations of the claim recited above, Kalinowski does not teach two different information units where one information unit is contained in the identification information stored in a memory stage of a circuit and another information unit is contained in a different identification information stored in a memory stage of a different circuit. Additionally, Kalinowski and Hulvey do not teach signal processing means, as a consequence of receiving and processing the indicator signal, are arranged, firstly, to interrupt the supply of the identification information that has caused the

indicator signal and are arranged, secondly, to memorize at least the information unit that has caused the indicator signal.

A. Kalinowski Does Not Teach Two Different Information Units Where One Information Unit is Contained in the Identification Information stored in a Memory Stage of a Circuit and Another Information Unit is Contained in a Different Identification Information Stored in a Memory Stage of a Different Circuit.

The Office Action relies solely on Kalinowski as purportedly teaching two different information units, of which two different information units the one information unit is contained in the identification information stored in a memory stage of a circuit and the other information unit is contained in different identification information stored in a memory stage of a different circuit, as recited in the claim. However, Kalinowski does not teach two different information units, two different sets of identification information, two different circuits, and each circuit with its own memory.

Kalinowski generally teaches a process for detecting simultaneous transmissions of electronic tags associated with a single device. Kalinowski, page 2, paragraph 35. Specifically, Kalinowski teaches that several electronic tags are associated with a single device. *Id.* The Office Action appears to rely on the electronic tags of Kalinowski to teach the two different information units. Office Action, page 3. The Office Action then appears to rely on a single set of “information” stored on a single memory 22 to teach two different sets of identification information in which the two different information units are contained where each set of identification information is stored on a different memory, respectively. *Id.* Yet, Kalinowski only teaches a single device, the query/read/write (QRW) device 30. Kalinowski, page 2, paragraph 35; page 3, paragraph 54. In fact, Kalinowski only teaches a single memory, which is the memory 22. Kalinowski, page 3, paragraph 59; illustrated in Fig. 1. Hence, the Office Action relies on a single device with a single memory to teach both (1) a first information unit contained in a first set of identification information stored on a first memory chip on a first circuit, and (2) a second information unit contained in a second set of identification

information stored on a second memory chip on a second circuit. Specifically, the Office Action states:

[T]he one information unit is contained in the identification information stored in the memory stage of the circuit (Kalinowski Par. 59; “The information relative to the product with which the tag is associated are recorded in a memory 22”); and the other information unit is contained in different identification information stored in a memory stage of a different circuit (Kalinowski Par. 35; “tag identification system including a multiplicity of electronic tags associated with a query/read/write device”).  
Office Action, May 1, 2009, page 3 (emphasis added).

Hence, the Office Action relies on the same single “QRW device” that houses the memory 22 to teach a memory on one circuit as well as a different memory on a different circuit. Yet, Kalinowski only teaches one device, the QRW device 30, housing one memory, the memory 22. Kalinowski, page 3, paragraphs 54-59; illustrated in Fig. 1. Therefore, since Kalinowski only teaches one circuit with a single memory, Kalinowski fails to describe two different information units, of which two different information units the one information unit is contained in the identification information stored in a memory stage of a circuit and the other information unit is contained in different identification information stored in a memory stage of a different circuit, as recited in the claim.

B. Kalinowski and Hulvey Do Not Teach Signal Processing Means, as a Consequence of Receiving and Processing the Indicator Signal, Are Arranged, Firstly, to Interrupt the Supply of the Identification Information that has Caused the Indicator Signal and Are Arranged, Secondly, to Memorize At Least the Information Unit that has Caused the Indicator Signal.

The Office Action relies solely on Kalinowski as purportedly teaching signal processing means. The Office Action then relies solely on Hulvey as purportedly teaching the indicated functions of the signal processing means, that is, firstly, interrupting a supply of identification information that has caused an indicator signal, and

secondly, memorizing at least the information unit that has caused the indicator signal. However, Kalinowski and Hulvey do not teach the indicated language of the claim.

Kalinowski generally teaches circuits 20, 28, and 32. Kalinowski, page 3, paragraphs 58-61; illustrated in Fig. 1. The Office Action relies on the circuits 20, 28, and 32 as teaching the signal processing means. Office Action, page 3. Specifically, circuit 20 demodulates a modulated carrier frequency signal  $F_0$ . Kalinowski, page 3, paragraph 58. Circuit 28 controls a switch 38. Kalinowski, page 3, paragraph 61. The synthesis circuit 32 provides messages that are applied to circuit 28. Id. The circuits 20, 28, and 32 do not teach signal processing means because circuit 20 merely describes a demodulator, circuit 32 merely describes a message generator, and circuit 28 merely describes a switch controller.

Even if Kalinowski were understood to teach signal processing means, the combination of Kalinowski and Hulvey nevertheless fails to teach the indicated language of the claim because Hulvey does not teach the functions of the signal processing means recited in claim 1. Hulvey generally teaches querying and identifying data on a communication channel. Hulvey, abstract. Specifically, Hulvey teaches several steps in the process of querying and identifying data on a communication channel. Hulvey, pages 5 and 6, paragraph 67; illustrated in Fig. 6. The Office Action relies on steps 96 and 98 to teach, firstly, interrupting a supply of identification information that has caused an indicator signal, and secondly, memorizing at least the information unit that has caused the indicator signal. Office Action, page 4. Additionally, the Office Action relies on a “CHANGE2” command of Hulvey (Hulvey, page 3, paragraph 59; illustrated in Fig. 4) to teach an indicator signal. Office Action, page 4. Step 92 teaches an interrogating system to determine if the length of a newly created bit string is equal to K bits, where K represents the number of ID bits that form a unique ID of a transponder. Hulvey, pages 5 and 6, paragraph 67. If the bit string does not equal K bits, then the system proceeds to step 96. Id. Step 96 teaches that the interrogating system pushes the new bit string to a non-isolated transponder stack and proceeds to step 98. Id. Step 98 teaches that the interrogating system appends a bit to a bit string buffer, and then continues to step 100. Id.

Even if the Office Action were to rely on step 96 to teach interrupting a supply of identification information that has caused an indicator signal and step 98 to teach memorizing at least the information unit that has caused the indicator signal, neither step teaches interrupting a supply of identification information or memorizing at least an information unit. Step 96 merely teaches pushing a bit string to a non-isolated transponder stack. As explained above, the Office Action relies on the “information” of Kalinowski stored in memory 22 to teach identification information. However, as expected, step 96 of Hulvey mentions nothing about interrupting a supply of the “information” stored on the memory 22 of Kalinowski. Hence, Hulvey appears to be silent with regard to interrupting the supply of the identification information.

Additionally, step 98 merely teaches recording a binary “1” as a bit received by appending the bit to a bit string buffer. Although step 98 teaches recording data, as explained above, the Office Action relies on the CHANGE2 command of Hulvey to teach an indicator signal and then relies on the electronic tags of Kalinowski to teach an information unit. Yet, step 98 mentions nothing about memorizing an electronic tag of Kalinowski that causes the CHANGE2 command in Hulvey. Hence, Hulvey appears to be silent with regard to memorizing at least the information unit that has caused the indicator signal.

Nevertheless, even if Hulvey were to teach interrupting the supply of the identification information and memorizing at least the information unit that has caused the indicator signal, Hulvey nevertheless fails to teach first interrupting and then second memorizing as a consequence to receiving and processing an indicator signal. As explained above, the Office Action relies on the CHANGE2 command of Hulvey to teach the indicator signal. Yet, steps 96 and 98 are not triggered as a consequence of receiving and processing the CHANGE2 command. As illustrated in Fig. 6 of Hulvey, the step of transmitting the CHANGE2 command does not occur until step 102. As shown, step 102 occurs after steps 96 and 98. Hence, steps 96 and 98 could not possibly occur as a consequence to transmitting the CHANGE2 command. Instead, the transmission of the CHANGE2 command at step 102 occurs as a consequence to steps 96 and 98. Therefore, Kalinowski fails to describe signal processing means, as a consequence of receiving and processing the indicator signal, are arranged to interrupt the supply of the identification

information that has caused the indicator signal and are arranged, secondly, to memorize at least the information unit that has caused the indicator signal, as recited in the claim.

2. The Proposed Combination of the Teachings of Kalinowski With Hulvey is Improper Because the Office Action Does Not Establish a *Prima Facie* Rejection for Claim 1.

Moreover, the rejection of claim 1 is improper because the Office Action does not establish a *prima facie* rejection for claim 1. In order to establish a *prima facie* rejection of a claim under 35 U.S.C. 103, the Office Action must present a clear articulation of the reason why the claimed invention would have been obvious. MPEP 2142 (citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_ (2007)). The analysis must be made explicit. *Id.* Additionally, rejections based on obviousness cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.* In support of the rejection, the Office Action states:

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Hulvey's invention, which uses an indicator signal, and means of storing information units of multiple responding tags, inside the processor of Kalinowski, to further improve the invention of Kalinowski. Kalinowski [*sic*] present invention already detects when a collision accrues between two RFID tags, and by combining with Hulvey, Kalinowski would be able to isolate the tag that caused the collision and go back and retrieve the rest of the information at a later time. This method for improving the invention of Kalinowski was within the ordinary ability of one of ordinary skill in the art based on the teachings of Hulvey.  
Office Action, May 1, 2009, pages 4 and 5 (emphasis added).

However, if the only reason to isolate the tag that caused the collision is in the present application, then the rejection of the present application is based on impermissible hindsight. Specifically, the reasoning presented in the Office Action to combine the cited references merely employs impermissible hindsight because it relies on a motivation of the present application, without providing specific evidence of disclosure in the cited references or evidence of common knowledge.



Therefore, in the absence of some additional reasoning, it appears that the only basis for the asserted conclusion—isolating a tag that caused a collision—stems directly from the disclosure of the present application. In fact, the Office Action does not attempt to identify any rationale to support the assertion that isolating a tag that caused a collision might result in retrieving “the rest of the information at a later time.” Rather, the primary reason for the proposed combination is merely derived from the present application, which states that:

The information unit-processing means 24 are furthermore arranged to add every information unit received after the determined information unit to the information units already stored and, when the entire identification information II is present, to supply this identification information II for the purposes of communication with the data carrier 3. The advantage is thereby gained that after a collision has occurred, unnecessary repetition of information unit already supplied is omitted.  
Present Application, page 13, lines 3-8 (emphasis added).

While the present application does not explicitly state “to isolate the tag that caused the collision and go back and retrieve the rest of the information at a later time,” as stated in the Office Action, the statement of isolating the tag is merely incidental to the specific advantages achieved by embodiments described in the present application, namely, omitting unnecessary repetition of an information unit that is already supplied. Therefore, the assertion that it would be obvious to combine the teachings of Hulvey with Kalinowski in order to isolate a tag to retrieve the information at a later time is not supported by any specific evidence other than the disclosure of the present application. Therefore, since the only specific rationale for implementing the claimed embodiments is only found in the present application, the reasoning presented in the Office Action to combine the cited references merely employs impermissible hindsight that is ultimately based on the disclosure of the present application. Hence, the Office Action does not establish a *prima facie* rejection for claim 1.

For the reasons presented above, the combination of Kalinowski and Hulvey does not teach all of the limitations of the claim because Hulvey does not teach the indicated limitations of claim 1. Additionally, as a separate basis for patentability, the proposed combination of the teachings of Hulvey with Kalinowski is improper because the

proposed combination is based on impermissible hindsight, rather than some articulated reasoning with some rational underpinning. Since the proposed combination is not based on some articulated reasoning with some rational underpinning, the Office Action does not establish a *prima facie* rejection of claim 1. Accordingly, Applicants respectfully assert claim 1 is patentable over the proposed combination of Kalinowski and Hulvey.

#### Independent Claims 7 and 12

Applicants respectfully assert independent claims 7 and 12 are patentable over the proposed combinations of cited references at least for similar reasons to those stated above in regard to the rejection of independent claim 1. Each of claims 7 and 12 recites subject matter which is similar to the subject matter of claim 1 discussed above. Although the language of these claims differs from the language of claim 1, and the scope of these claims should be interpreted independently of other claims, Applicants respectfully assert that the remarks provided above in regard to the rejection of claim 1 also apply to the rejections of these claims.

#### Dependent Claims

Claims 2-6, 8-11, 13, and 14 depend from and incorporate all of the limitations of independent claims 1, 7, and 12, respectively. Applicants respectfully assert claims 2-6, 8-11, 13, and 14 are allowable based on allowable base claims. Additionally, each of claims 2-6, 8-11, 13, and 14 may be allowable for further reasons, as described below.

In regard to claims 2 and 8, Applicants respectfully submit that claims 2 and 8 are patentable over the combination of Kalinowski and Hulvey because the combination of cited references does not teach all of the limitations of claims 2 and 8. Claim 8 recites subject matter which is similar to the subject matter of claim 2 discussed below. Claim 2 recites:

A circuit as claimed in claim 1, wherein the signal processing means comprise a demodulator stage, which is arranged to demodulate a carrier signal appearing at the interface and to supply a demodulated carrier signal, and wherein the signal processing means comprise a decision stage, which is designed to receive the demodulated carrier signal and to decide whether the indicator signal was received.

(Emphasis added.)

In contrast, the cited references do not teach the indicated limitations of the claims. The Office Action does not rely on Kalinowski as teaching a decision stage. Office Action, page 5. In fact, the Office Action relies solely on Hulvey to teach a decision stage. Id. However, Hulvey does not teach a decision stage to receive a demodulated carrier signal (DC) and to decide whether the indicator signal (IS) was received.

Hulvey generally relates to detecting simultaneous transmissions from electronic tags. Hulvey, abstract. More specifically, Hulvey teaches a control circuit 36 that commands a transmit circuit 34 to respond to a transmission. Hulvey, page 3, paragraph 19. Additionally, Hulvey teaches a step 134. Hulvey, page 6, paragraph 71. At step 134, “the device determines if the CHANGE2 command is detected; if this applies, then the device continues to step 136; if it does not apply, then the device proceeds to step 137 to determine if the CHANGE1 command is detected.” Id. Additionally, Hulvey teaches that a “filtered received signal” is demodulated and detected by a control microprocessor. Hulvey, page 3, paragraph 20. The Office Action relies on the control circuit 36 and step 134 to teach a decision stage to receive a demodulated carrier signal and to decide whether an indicator signal was received. Office Action, page 5. As described above, the Office Action also relies on the CHANGE2 command of Hulvey to teach an indicator signal. Hence, the Office Action asserts that the control circuit 36 of Hulvey teaches a decision stage that is configured to receive the demodulated “filtered received signal” and to decide whether the CHANGE2 command was received. Yet, Hulvey does not teach that the control circuit 36 receives the demodulated “filtered received signal.”

Although Hulvey teaches a control circuit 36 detects whether a CHANGE2 command is received, Hulvey fails to teach a decision stage to decide whether the indicator signal (IS) was received, as recited in the claims. Therefore, claims 2 and 8 are patentable over the combination of Kalinowski and Hulvey because the combination of cited references does not teach all of the limitations of claims 2 and 8. Accordingly, Applicants respectfully assert claims 2 and 8 are patentable over the proposed combination of Kalinowski and Hulvey.

In regard to claims 3 and 9, Applicants respectfully submit that claims 3 and 9 are patentable over the combination of Kalinowski and Hulvey because the combination of cited references does not teach all of the limitations of claims 3 and 9. Claim 9 recites subject matter which is similar to the subject matter of claim 3 discussed below. Claim 3 recites:

A circuit as claimed in claim 1, wherein the signal processing means comprise a sequence control arrangement, which sequence control arrangement includes a memory stage, by means of which the position of the information unit within the identification information causing the indicator signal can be stored.  
(Emphasis added.)

In contrast, the cited references do not teach the indicated limitations of the claims. The Office Action does not rely on Kalinowski as teaching a sequence control arrangement. Office Action, page 6. In fact, the Office Action relies solely on Hulvey to teach a sequence control arrangement. *Id.* However, Hulvey does not teach the indicated limitations of the claims.

Hulvey generally relates to detecting simultaneous transmissions from electronic tags. Hulvey, abstract. Specifically, Hulvey teaches a CHANGE2 command indicates a bit string length does not equal a value “K.” The Office Action relies on the CHANGE2 command and the steps 92, 96, and 98 described above to teach a control sequence arrangement that includes a memory that stores a position of an information unit within identification information causing an indicator signal. Additionally, Hulvey teaches that the step 100 causes the transmission of the CHANGE2 command in step 102 when a length of a bit string does not equal K. Hulvey, pages 5 and 6, paragraph 67 (“At step 100, the interrogating system determines if the length of the bit string is equal to K bits again; if this criterion now applies, then the system proceeds to step 104; if this criterion does not apply, then the system proceeds to step 102, where it transmits a CHANGE2 command”).

Nevertheless, even if Hulvey were to teach an information unit within identification information, Hulvey stills fail to teach a position of an information unit within identification information. This is because steps 92, 96, and 98 merely teach determining if the length of a newly created bit string is equal to K bits, pushing the new

bit string to a non-isolated transponder stack, and appending a bit to a bit string buffer. Hulvey, pages 5 and 6, paragraph 67. Determining bits lengths, pushing bits, and appending bits do not describe or imply any teaching related to a position of data within a set of data. Hence, Hulvey does not teach a position of an information unit within identification information.

Since Hulvey does not teach a position of an information unit within identification information Hulvey could not teach storing a position of an information unit within identification information. However, the Office Action points to an example of steps 96 and 98 to teach storing a position of an information unit within identification information. Office Action, page 6. The particular example describes an interrogating system storing one transponder ID as binary “11” and storing a second transponder ID as “10.” Hulvey, page 7, paragraph 78. It appears that the Office Action implies that mentioning a recording of a first transponder ID and then the recording of a second transponder ID suggests that the transponder IDs are stored in a particular order, or position, and that this particular order is then stored on a memory. However, Hulvey does not mention the actual order in which the transponder IDs are stored or the position of the stored IDs relative to each other or other stored IDs. Hulvey merely describes recording two transponder IDs. Merely recording two IDs does not further imply storing a position of the stored IDs among one another or among a set of stored IDs. Hence, Hulvey does not teach storing a position of an information unit within identification information. Therefore, claims 3 and 9 are patentable over the combination of Kalinowski and Hulvey because the combination of cited references does not teach a sequence control arrangement, which sequence control arrangement includes a memory stage, by means of which the position of the information unit within the identification information causing the indicator signal can be stored, as recited in the claims. Accordingly, Applicants respectfully assert claims 3 and 9 are patentable over the proposed combination of Kalinowski and Hulvey.

## CONCLUSION

Applicants respectfully request reconsideration of the claims in view of the amendments and the remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-4019** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-4019** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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